DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-029722
Date Inspected: 18-Jun-2013

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: USA Hoist

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Crest Hill, IL

CWI Name: Robert Zimny

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☐ Yes	☑ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS Tower Elevator

Summary of Items Observed:

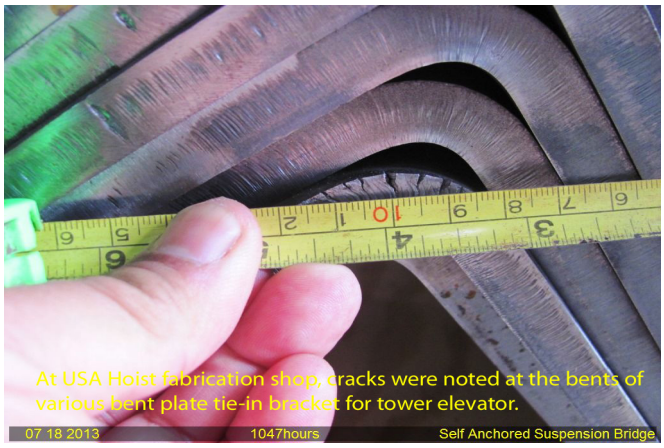
Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at USA Hoist, Crest Hill, IL as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

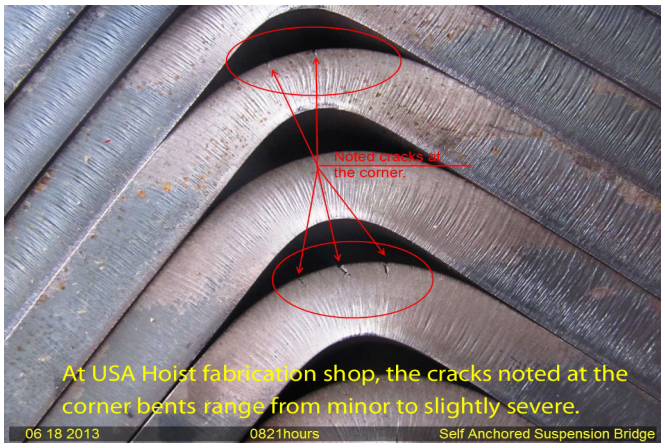
At USA Hoist assembly shop, qualified welder Matt Wasiqi was observed continuing to perform fillet welding the front tie-in brackets for the tower elevator. The welder was noted using the gas shielded Flux Cored Arc Welding (FCAW-G) with 1.1mm E71T-1C Familiarc DW-50 wire electrode and implementing welding procedure specification FCAW 3210. The shielding gas being used was noted a combination of 75% Argon and 25% CO2 with flow rate of 38 CFH. During the shift, the working welding parameters were measured 29 volts and 230 amperes which deemed in compliance to the project requirements. This QA randomly checked the workmanship and measured the required ¼" fillet on all sides of the stiffener which was found in compliance to the requirement. With the number of brackets to be welded (146 pieces), fillet welding should continue until the end of the week.

Another USA Hoist qualified welder Andres Luna was observed continuing to perform fillet welding the same front tie-in brackets for the tower elevator as mentioned above. The welder was noted using the same process and implementing the same welding procedure specification. The welder was noted using gas shielded FCAW-G with 1.1mm E71T-1C Familiarc DW-50 wire electrode implementing USA Hoist Welding Procedure Specification FCAW 3210. The shielding gas being used was noted a combination of 75% Argon and 25% CO2 with flow rate of 40 CFH. During the shift, the working welding parameters were measured 26 volts and 200 amperes which deemed in compliance to the project requirements. This QA randomly checked the workmanship and measured the required ¼" fillet on all sides of the stiffener which it was found in compliance to the requirement. With the two

welders welding side by side on the front tie-in brackets, approximately 120 pieces were completed as of to date.

During the shift and inspection rounds of this QA, it was noted that some of the bent plate tie-in brackets are showing some cracks at the corner where the bent is. This issue was immediately brought to the attention of USA Hoist Project Engineer Bob Overbeek who came and saw for himself the cracks. Mr. Overbeek then informed this QA that they intend to grind and remove the cracks and if there is anything that shows up bad then USA will discard them but did not mention what to do after grinding. This QA took some photographs and sent them to Caltrans SMR Tim Truong and METS Supervisor Mike Foerder for information. Mr. Tim Truong communicated with this QA thru e-mail and telephone conversation regarding the bent plate tie-in bracket issue. He also mentioned during the conversation that USA Hoist can grind the cracks to 1/8” and will ask them (USA HOIST) to perform Magnetic Particle Testing (MT). An Incident Report was initiated due to the cracks that were noted on some of the various bent plate brackets.





Summary of Conversations:

The crack issue on various bent plate brackets was brought to the attention of USA Hoist Project Engineer Bob Overbeek. During the conversation, he mentioned to this QA that USA Hoist will grind remove the cracks on the brackets and if there are cracks on the brackets that are bad USA Hoist will discard them.

Caltrans SMR Tim Truong also informed this QA that USA Hoist can grind up to 1/8" to remove the cracks. He also mentioned that he will ask USA Hoist to perform MT on all bent plate brackets.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Gary Thomas 916-764-6027, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Foerder,Mike	QA Reviewer